

**ENGINEERING AND LAND SURVEYING  
EXAMINING BOARD[193C]**

**Notice of Intended Action**

**Twenty-five interested persons, a governmental subdivision, an agency or association of 25 or more persons may demand an oral presentation hereon as provided in Iowa Code section 17A.4(1)“b.”**

**Notice is also given to the public that the Administrative Rules Review Committee may, on its own motion or on written request by any individual or group, review this proposed action under section 17A.8(6) at a regular or special meeting where the public or interested persons may be heard.**

Pursuant to the authority of Iowa Code section 542B.6, the Engineering and Land Surveying Examining Board proposes to amend Chapter 4, “Engineering Licensure,” Iowa Administrative Code.

The proposed amendments to Chapter 4 clarify the education, experience and reference requirements for licensure.

Any interested person may make written or oral suggestions or comments on the proposed amendments on or before March 13, 2013. Comments should be directed to Robert Lampe, Executive Officer, Iowa Engineering and Land Surveying Examining Board, 1920 SE Hulsizer Road, Ankeny, Iowa 50021; by telephone at (515)281-7360; or by e-mail to [robert.lampe@iowa.gov](mailto:robert.lampe@iowa.gov).

A public hearing will be held on Wednesday, March 13, 2013, from 9 to 10 a.m. at the offices of the Professional Licensing Bureau, 1920 SE Hulsizer Road, Ankeny, Iowa. At the hearing, persons who wish to speak will be asked to give their names and addresses for the record and to confine their remarks to the subject of the proposed amendments.

Any person who plans to attend the public hearing and has special requirements, such as those related to hearing or mobility impairments, should contact the Board to discuss specific needs.

These proposed amendments are subject to waiver or variance pursuant to 193—Chapter 5.

These proposed amendments were approved by the Board on January 9, 2013.

After analysis and review of this rule making, no adverse impact on jobs has been found. Although there should be no impact on jobs, the Board will continue to work with stakeholders to minimize any negative impact and maximize any positive impact towards jobs.

These amendments are intended to implement Iowa Code section 542B.2.

The following amendments are proposed.

ITEM 1. Rescind subrules 4.1(3) and 4.1(4) and adopt the following **new** subrules in lieu thereof:

**4.1(3)** Third, the applicant must satisfy the qualifying experience requirements. The purpose of this provision is to ensure that the applicant has acquired the professional judgment, capacity and competence to design engineering works, structures, and systems. The following criteria will be considered by the board in determining whether an applicant’s experience satisfies the statutory requirements.

*a. Oversight.* All applicants must have direct supervision or professional tutelage (instruction, guidance, mentoring, review, and critique) from one or more licensed professional engineers. This experience must be verified by one or more licensed professional engineers who are familiar with the applicant’s work and can attest that the experience was of the required quality and was accurately described. Verification of the qualifying experience is provided through the reference forms. It is the responsibility of the applicant to provide reference forms to the licensed professional engineers to complete and return directly to the board.

(1) To be readily acceptable, all of the qualifying experience shall be under the direct supervision and tutelage of one or more licensed professional engineers.

(2) To be considered, a portion of the qualifying experience shall be under the direct supervision or tutelage of one or more licensed professional engineers. In this case, the rest of the qualifying experience shall be under the direct supervision or tutelage of an unlicensed graduate engineer.

*b. Documentation of experience.* All applicants must submit references and a work project description. Applicants who did not have all of their qualifying experience under the direct supervision

and tutelage of one or more licensed professional engineers (see subparagraph 4.1(3)“a”(2)) must also submit the additional supporting documentation described in subparagraph 4.1(3)“b”(3). The board reserves the right to contact the employer and the person providing tutelage on the project for information about the project experience acquired by the applicant.

(1) References. An applicant for the Principles and Practice of Engineering examination shall submit five references on forms provided by the board.

1. At least three of the five references shall be from licensed professional engineers.

2. At least one of the licensed professional engineers who provide a reference for the applicant shall have provided direct supervision or professional tutelage in the course of a mentoring relationship on such matters as technical skills; professional development; the exercise of professional judgment, ethics, and standards in the application of engineering principles and in the review of such matters by others; and the professional obligations of assuming responsible charge of professional engineering works and services.

3. At least one reference shall be from a supervisor. If the applicant has had more than one supervisor, at least two of the references shall be from a supervisor of the applicant. An applicant shall submit supervisor references to verify at least four years of qualifying experience.

4. If an applicant has had professional experience under more than one employer, the applicant shall provide references from individuals with knowledge of the work performed under a minimum of two employers.

5. The board reserves the right to contact references, supervisors, or employers for information about the applicant’s professional experience and competence or to request additional references.

6. All licensed professional engineers who submit references for an applicant shall be sufficiently familiar with the applicant’s work product to formulate credible opinions on the applicant’s capacity to assume responsible charge of professional engineering works and services.

7. Applicants who have not been supervised or provided tutelage by a licensed professional engineer for at least four years of qualifying experience shall submit one or more references to verify tutelage by one or more unlicensed graduate engineers, as provided in subparagraph 4.1(3)“a”(2).

8. The board uses references partially as a means of verifying an applicant’s record of experience. The applicant must distribute a reference form to individuals who are asked to submit references for the applicant. To each reference form, the applicant shall attach a copy of the portion of the applicant’s experience record that is being addressed by the referring individual.

9. An applicant for the Fundamentals of Engineering examination whose engineering degree is not from an ABET/EAC or CEAB accredited engineering program must provide a reference from a supervisor on a form provided by the board.

10. The board may require the applicant to submit additional letters of reference or other evidence of suitable tutelage and supervision.

11. The board may require an oral interview with the applicant or other evidence to verify the applicant’s knowledge and experience in the principles and practice of engineering.

12. The board may conduct interviews with persons providing tutelage or supervision to the applicant.

(2) Work project description. An applicant for initial licensure as a professional engineer must include with the application a work project statement describing a significant project on which the applicant worked during the previous 12 months. The board will review all work project statements and will approve only those that include all of the components listed below in paragraphs 4.1(3)“b”(2)“1” to “4” and meet the criteria listed in paragraph 4.1(3)“b”(2)“5.”

1. The statement shall describe the applicant’s degree of responsibility for the project.

2. The statement shall identify the project’s owner and location.

3. The statement shall include the name of the supervisor in charge of the project and, if the supervisor is a professional engineer, the license number of the supervisor.

4. The statement shall be signed and dated by the applicant.

5. Criteria the board shall use in evaluating the acceptability of the project as qualifying experience for the applicant shall include, but not be limited to, the following:

- The degree to which the project and the experience described have progressed from assignments typical of initial assignments to those more nearly expected of a licensed professional;
- The scope and quality of the professional tutelage experienced by the applicant;
- The technical decisions required of the applicant in the project; and
- The professional decisions required of the applicant.

(3) Additional supporting documentation. Applicants who did not have all of their qualifying experience under the direct supervision and tutelage of one or more licensed professional engineers (see subparagraph 4.1(3) “a”(2)) must also submit the following additional supporting documentation.

1. Cover letter to the board requesting consideration.
2. Reference from the unlicensed engineer who provided direct supervision or tutelage on forms provided by the board, to include:

- Assessment of the applicant’s performance, development, integrity, and ability to assume responsible charge.
- Description of the engineer’s background in education and experience.
- Nature of the tutelage provided to the applicant.

c. *Quality.* Qualifying experience shall be of such quality as to demonstrate that the applicant has developed technical skill and initiative in the correct application of engineering principles. Such experience should demonstrate the applicant’s capacity to review the application of these principles by others and to assume responsibility for engineering work of professional character.

d. *Scope.* Experience shall be of sufficient breadth and scope to ensure that the applicant has attained reasonably well-rounded professional competence in a basic engineering field, rather than highly specialized skill in a narrow and limited field.

e. *Progression.* The record of experience shall indicate successive and continued progress from initial, subprofessional work of simpler character to recent, professional work of greater complexity and a higher degree of responsibility, as well as continued interest and effort on the part of the applicant toward further professional development and advancement. In evaluating this progression, the board will consider both subprofessional and professional activity as reported by the applicant. However, only work experience obtained after the applicant’s receipt of the qualifying degree will be considered, except as described in paragraph 4.1(3) “f.” Subprofessional work includes the time spent as an engineering technician, engineering assistant, inspector, or similar under the direct supervision of a licensed professional engineer. Professional work includes the time during which the applicant was occupied in engineering work of higher grade and responsibility than that defined above as subprofessional work. Time spent in teaching engineering subjects in a college or university at the level of assistant professor or higher may be listed as professional work.

f. *Special work experience.* Work experience prior to graduation from college may be accepted toward satisfaction of qualifying experience requirements only as follows: Cooperative work programs administered by engineering colleges and verified on the transcript and internships administered by engineering colleges with a verifying reference from the internship supervisor will be considered as half-time credit, with a maximum allowance of 6 months (12 months of cooperative work experience or internship) applicable toward the satisfaction of qualifying experience requirements. An applicant’s advanced education, military experience, or both will be reviewed in order to determine if they are applicable toward the statutory requirements for experience.

g. *Advanced education.* An applicant who has earned a master of science degree that includes research experience, in addition to writing an associated thesis, from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline and who has fulfilled the requirements for a bachelor of science degree may be granted a maximum of one-half year’s experience credit. An applicant who has earned a doctor of philosophy degree from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline may be granted a maximum of one year’s experience credit in addition to the one-half year’s credit for the master of science degree.

h. *Teaching experience.* Teaching of engineering subjects at the level of assistant professor or higher in an accredited engineering program may be considered as experience, provided the applicant’s

immediate supervisor is a licensed professional engineer in the jurisdiction in which the college or university is located. If the applicant's immediate supervisor is not a licensed professional engineer, a program of mentoring or peer review by a licensed professional engineer acceptable to the board must be demonstrated. Applicants using teaching or research as experience must have a minimum of four years of acceptable experience in research, industry, or consulting. The board shall consider the complexity of the project(s) presented, the degree of responsibility of the applicant within the project, and other factors the board deems relevant. Academic experience must demonstrate increasing levels of responsibility for the conduct and management of projects involving engineering research, development or application. The board reserves the right to contact employers for information about the applicant's professional experience and competence.

*i. Joint applications.* Applicants requesting licensure both as a professional engineer and a land surveyor must submit a history of professional experience in both fields. Such histories will be considered separately on a case-by-case basis. The board does not grant full credit for concurrent experience in both professions.

*j. Corporate exemption.* The purpose of the provisions on qualifying experience which authorize the board to consider some experience that was not acquired under the direct supervision and tutelage of a licensed professional engineer is to provide a path toward licensure for those applicants who gain experience in settings where licensure is not required under the corporate exemption set forth in Iowa Code section 542B.26 or under similar statutory provisions in other jurisdictions. Such applicants may lawfully gain professional engineering experience under the supervision or tutelage of graduate engineers who are not licensed. To aid such applicants, the following guidelines are provided:

(1) The board shall not consider any experience gained under circumstances where the applicant could not lawfully have practiced professional engineering.

(2) The board shall not consider any experience the applicant may have attained in compliance with the law but that was not under the supervision or tutelage of a graduate engineer. The fundamental purpose of qualifying experience is professionally guided training to expand and complement engineering education. Self-guided experience does not qualify.

(3) Persons who desire licensure as professional engineers who are not directly supervised by licensed professional engineers should form tutelage relationships with licensed professional engineers as early in the process of gaining experience as is feasible. Unlicensed graduate engineers are not authorized to offer professional engineering services to the public or to be in responsible charge of such services; nor are they subject to the examinations required for licensure, the professional and ethical standards applicable to licensees, or the regulatory oversight of a licensing authority. Qualifying experience is intended to address both technical competence and the obligations to the public of a licensed professional engineer.

(4) Because the circumstances of individual applicants in corporate exemption settings are diverse, it is not possible to identify the minimum period of time during which the applicant must receive supervision or tutelage from one or more licensed professional engineers to be eligible for licensure. The board shall take into consideration both the quantity and quality of such experience. In general, an applicant's exposure to supervision or tutelage by one or more licensed professional engineers should reflect a sustained period of in-depth interaction from which the licensed engineers are in a position to form credible opinions on the applicant's qualifications to be in responsible charge of engineering services offered to the public as a licensed professional engineer.

(5) The burden is on the applicant to demonstrate to the board's satisfaction that the combination of unlicensed and licensed supervision and tutelage satisfies the requirements of qualifying experience described in this rule.

**4.1(4)** Fourth, the applicant must successfully complete the Principles and Practice of Engineering examination.

*a.* To qualify to take this examination, the applicant must present a record of four years or more of practical experience in engineering work which is of a character satisfactory to the board. This experience must have been obtained after the receipt of the qualifying education and prior to the application due date for the examination.

b. An applicant for the Principles and Practice of Engineering examination shall have a minimum of one year of practical experience in the United States of America or a territory under its jurisdiction.

ITEM 2. Rescind subrules **4.1(5)** and **4.1(7)**.

ITEM 3. Renumber subrules **4.1(6)**, **4.1(8)** and **4.1(9)** as **4.1(5)**, **4.1(6)** and **4.1(7)**, respectively.

ITEM 4. Amend subrule 4.2(1) as follows:

**4.2(1) References.** An applicant for licensure by comity shall submit references on forms provided by the board to verify at least four years of satisfactory experience after the receipt of the qualifying degree. This experience must be under the supervision of a licensed professional engineer, or the applicant must provide unlicensed tutelage references verifying at least four years of satisfactory engineering experience, as provided in paragraph ~~4.1(7)“a.”~~ 4.1(3)“a.” The board reserves the right to contact employers for information about the applicant’s professional experience and competence.

ITEM 5. Amend paragraph **4.2(3)“d”** as follows:

d. Fourth, the applicant must have a record of four years or more of practical experience in engineering work which is of a character satisfactory to the board. This experience must have been obtained after the receipt of the appropriate education and must meet the requirements for practical experience found at paragraph ~~4.1(7)“a.”~~ 4.1(3)“a.”

ITEM 6. Amend paragraph **4.2(4)“c”** as follows:

c. For all other applicants who were originally licensed in a jurisdiction other than Iowa on or after July 1, 1988, the board will employ the chart found at subrule ~~4.1(6)~~ 4.1(5) to determine if the applicant’s licensure was granted after satisfaction of requirements substantially equivalent to those which are required by Iowa Code section 542B.14.